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# WORK SHOP SAFETY

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*Accident Prevention Series No. 1*

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## INTRODUCTION

Rules are just as necessary at work as they are in games or competitive sports. Safety rules are needed in order that every employee may be a part of the team and be reasonably sure of finishing a day's work free of injury.

This booklet presents a few of the important safety regulations that have been generally adapted by industry. These rules and comments have been developed over a period of years from experiences and suggestions of workers, supervisors and safety engineers from all types of endeavors. Each of these practices has proved of value in helping to prevent accidents.

Learn these regulations and apply them at all times and you will be doing your part towards preventing injury to yourself and to your fellow workers. Experience has shown that the best safety device is a careful individual.

\* \* \*

An accident is an unexpected event being caused by one of two things, an *unsafe act* of a person or an *unsafe physical condition*, or, perhaps, a combination of both. Accident prevention is the foreseeing of the cause and taking definite steps to eliminate it. Prevent the accident and there will be no injury.

## **GENERAL SAFETY INSTRUCTIONS**

A safe worker is a good worker. Be sure you know the safe way to perform any job given to you. In case of doubt ask your supervisor.

You are not expected to take unnecessary chances or to work under hazardous conditions without adequate safeguards.

Report to your supervisor any unsafe condition or unsafe practice.

Walk, do not run up or down stairs. Keep your hands out of your pockets while on the stairs and use the handrail.

Obey warning tags and signs. They are posted to point out hazards.

Horseplay and practical jokes are dangerous and will not be tolerated.

Report all accidents to your supervisor immediately, whether or not anyone is hurt. In case of injury get first aid at once.

Safety rules are for your protection. Everyone is asked to live up to the spirit as well as the letter of these rules in order to safeguard himself and his fellow workers.

## **COMPRESSED AIR**

Compressed air must never be used to dust off clothing or to clean away dust and chips. It should not be used where it causes particles to fly over a large area.

Suitable face protection (safety glasses, goggles, or face shield) should be worn when using compressed air. Barriers or hoods should be used to confine the blast.

Pressure should not be turned on unless the hose nozzle is securely held to prevent it from kicking, and the line has been inspected for kinks and ruptures. Never kink the line to cut off the air.

Pressure should be kept as low as possible for doing the job adequately.

Practical jokes using compressed air have resulted in severe injury and sometimes death. Never use compressed air carelessly, or even point the hose at another worker.

## **ELECTRICAL EQUIPMENT**

Do not use electrical equipment or activated circuits if your hands are wet or if you are standing on wet ground.

In the case of overheating, sparking or smoking motors, wiring, and other electrical equipment, turn off the power and report the condition to your supervisor.

Do not attempt to repair defective wiring or other electrical equipment unless you are an electrician.

Extension cords should be inspected for breaks in the insulation, kinks and exposed strands or wire before use. Keep the cord out of aisles or other traveled areas.

Do not use electrical tools where there are flammable vapors or gases. A spark may cause an explosion or fire.

Ground wires leading from electrical apparatus must not be disconnected or broken.

All portable electric hand tools should be grounded.

## FIRE PREVENTION

Fire fighting equipment and fire exits must be kept clear and ready for immediate use.

Observe no-smoking regulations throughout the building.

Make sure that pipe dottles, cigarette and cigar ends are out before you discard them.

Under no circumstances should you smoke or bring open flames in areas where there are flammable materials stored or used.

You should become familiar with the operation and use of the various types of fire extinguishers provided. Also learn how to turn in a fire alarm, and what exit you should use in case of fire.

Solvents and flammable liquids are a major source of fire.

Use as little solvent as is necessary to do the job; keep solvents in self-closing containers; do not use solvents around sparks, flames, or excessive heat.

When you weld, cut, solder, or use any type of flame or heat, make sure there are no combustibles in the area. Remember that sparks from cutting equipment can travel 30 feet or more.

Good housekeeping is the best protection against fire. Do your part to make all work areas fire-safe by disposing of all scrap, wiping rags, newspapers, rubbish, and old paint and oil cans.

If you see a fire hazard and cannot do anything about it yourself, report it at once to your supervisor.

## **GAS CYLINDERS**

Compressed gas cylinders should always be handled as if full.

Avoid jarring, bumping, or dropping them.

If available, move cylinders by cylinder dolly.

The protective cap over the valve should be kept on when the cylinder is not in use.

Keep cylinders on end. Strap or chain them securely so they cannot fall. Keep them out of contact with grease, acids, salt, and heat or flame.

Never let grease or oil—even on your hands—get near oxygen cylinder controls.

Lifting cylinders is always a job for two men.

When not in use, turn off valves completely; make sure there are no leaks.

## **HEALTH**

Should you become ill on the job, do not continue to work. Report to your supervisor.

It is important that you come to work well rested and after a good breakfast. Fatigue caused by lack of sleep or food decreases efficiency and is a factor in many accidents.

When hands are soiled with ink, paint, oils or chemicals, wash them thoroughly before eating or smoking. Do not wash hands in gasoline or solvents—these can cause serious skin ailments and internal poisoning.

Keep physically fit and get a physical examination at least once a year.

## **HOUSEKEEPING**

Good housekeeping is the foundation for a safe, healthful and pleasant place to work.

The general rule for good housekeeping is “A place for everything and everything in its place.”

Keep materials and equipment out of aisles, passageways and off stairways.

Return tools and equipment to proper storage place after use.

Keep floors dry; avoid spilling liquids; wipe all spills immediately.

Oily rags, old paint cans and other containers that have held flammable liquids are a fire hazard. Dispose of these as soon as you can.

Throw trash and scrap in proper waste containers; place paint cloths and oily materials in covered metal containers.

Nails and broken glass are particularly dangerous. Remove or bend down nails in lumber or open containers.

Good housekeeping is necessary in lockers, locker rooms, wash rooms, lunch rooms and around drinking fountains. Every employee has a share in keeping these places clean.

## LADDERS

For any overhead work use a proper type ladder. Do not use makeshifts.

Use care in placing a ladder; the foot should be one fourth of the ladder length away from the wall against which the ladder is leaning.

Select a ladder with the right kind of safety feet for the surface and secure it in place.

Before using, check the ladder for weak or damaged rails and loose or broken rungs. If found defective take it out of service and report it to your supervisor.

Face the ladder and use both hands going up or down.

Do not overreach from ladders. Stay within safe limits of balance and never try to shift a ladder while you are on it.

Do not leave tools on the top of a stepladder or on any other elevated place from which they may fall.

Never work on the top step of a ladder.

Metal or wirebound ladders are not to be used when working on or near electrical equipment.

Be certain the hands and feet are dry and free from grease and dirt before climbing a ladder.

## LIFTING

Do not lift awkward or especially heavy materials by yourself. Get someone to help.

Inspect the object to be lifted for sharp corners, nails and other things that might cause injury.

Make a trial lift of the object, to determine if you can lift it without strain.

Set your feet solidly, somewhat apart. Sometimes it may be best to get down on one knee.

Crouch as close to the load as possible. Do not get into a full squat, but bend your legs.

Keep your back straight, but bend at the hips so you are over the load. The idea is to do the work with your leg muscles and not with the weaker back muscles.

Get a firm grip on the object, hands on diagonal corners.

If necessary, lift one end slightly to get a hand under it.

To lift, straighten your legs and swing your back into a vertical position.

In setting objects down, reverse the procedure making sure the leg muscles and not the back muscles do the work.

Keeping the legs straight and arching the back to set something down can result in a back injury.

It is advisable to wear gloves, aprons and steel-toed shoes when handling materials.

When removing nails or steel strapping cup goggles or a face shield should be worn.

If special trucks, racks, hoists or other devices are provided, use them. They are there to prevent injuries as well as to make work easier and faster.

## MACHINERY

Do not start or operate any machine, crane, industrial truck, elevator or any other piece of equipment unless you are authorized and qualified to do so.

Before starting machinery, make sure that everyone is in the clear and the guards and safety devices are in working condition and correctly adjusted. Do not operate it otherwise.

Stop all machinery before oiling or making adjustments.

After turning off a machine for repairs or adjustment use lockout devices or tags to make sure it will not be turned on without your knowledge.

Do not wear gloves, jewelry, neckties, long sleeves or loose clothing when operating machinery.

Do not leave moving machinery unattended—turn it off when you are through using it.

Guards on machinery are provided for your protection. If necessary to remove guards for any purpose, first obtain permission from your supervisor, then make sure the power is off before removing them. Replace guards when operation is finished.

## **PEDESTRIANS**

Workers should keep out from under cranes and suspended loads.

Workers should heed warning bells and horns of approaching power trucks and move to the side of the aisle to allow them to pass.

Do not take shortcuts over conveyors or through work and storage areas. This interferes with other

workers and may expose you to danger. Besides, it is usually quicker to walk in the aisles.

Keep out of areas which are barricaded or are marked restricted. There may be construction, welding, high voltage, or repair work going on that may expose you to danger.

Running is not permitted anywhere within the work area or on the grounds.

Many slips and falls can be avoided if all employees co-operate in picking up small objects from the floors.

Jumping from work platforms, scaffolds, loading docks, and other elevated places is not permitted.

## **PERSONAL CLOTHING**

For your safety and comfort, invest in work clothes that are sturdy, that fit well, and are washable.

Wear a hat to prevent your hair from getting tangled in moving machinery.

Short-sleeved shirts, or T-shirts, should be worn for operating machinery. Rolled-up sleeves are dangerous because they have flapping ends and the added thickness of the cloth can pull your arm into a machine before the cloth tears.

Long sleeves buttoned at the wrist should be worn for all work other than machine operation.

Pant legs should be cut to ankle length and the cuffs sewn up. Rolled-up cuffs collect dirt, and are likely to come down and cause you to fall.

Steel-toed shoes should be worn on all jobs involving handling or moving heavy material. Otherwise wear sturdy, comfortable work shoes.

Shoes with run-down heels and torn soles are hard on the feet, and can cause falls. Keep your shoes in good repair.

The safe worker does not wear rings, medals, identification bracelets, and other jewelry. Jewelry increases the danger of electric shock, and can cause fingers to be badly injured.

Women workers should wear slack suits or snug-fitting, plain work dresses.

Clothing with sashes, scarves, full sleeves, full skirts, and ornamental buttons, pins and other jewelry can be the cause of accidents.

Oxfords and other type low-heeled shoes are the most comfortable to work in, and also the safest to walk in.

A cap or hair net should be worn as protection against entanglement in moving machinery.

Work clothes should be washed frequently as a safeguard against skin infections and irritations.

Smocks, overalls, and aprons should be worn wherever possible to keep work clothes clean.

For outdoor work in winter weather, it is best to wear loose, warm, fairly light-weight clothing. Wear layers of clothing that you can peel off for inside work and put back on when you have to go outdoors.

## **PILING MATERIALS**

Have a safe base. That means a solid, smooth, level surface. If the floor or ground is not level, use dunnage or bearing strips or timber to make sure the pile will not shift.

Barrels and other materials that may roll or slide should be chocked at the base.

Pile to a safe height. That means not so high that the pile will be unsteady, so that floor load limit is not exceeded, and so that 18 inches remains between the pile and sprinkler heads.

Lock-in materials. Cross-tie or use dunnage between so there are no unsteady stacks within the pile.

Piles should also be stepped-back to ensure stability.

Maintain aisle space. Leave space so power trucks, fire equipment, and workers can get to the pile.

Dunnage and ends of material, especially bar stock and sharp material, should not protrude beyond the face of the pile.

## **PROTECTIVE CLOTHING AND SAFETY DEVICES**

Specific jobs in the public service require the wearing of special protective clothing in the form of rubber boots, suits or aprons etc. This clothing must be worn when the work requires such protection.

Gloves or hand pads are required on many jobs. Where gloves are required, be sure you have the proper type to offer necessary protection.

Wear a safety hat when working in the vicinity of overhead hazards.

Wear goggles or other eye protection when handling chemicals, drilling, buffing, grinding, using a wire brush, welding, using portable grinders, or any other work where there may be flying particles. Wear a face shield when the danger from flying particles does not necessitate goggles.

Wear the proper kind of respirator for dusty operations, spray painting or on similar jobs. The hazards from certain dusts, fumes, vapours and gasses should be recognized by all employees who come in contact with these elements.

Wear a safety belt with a life-line when working over pits, in tanks or when there is danger of falling or being overcome by fumes.

## TOOLS

Defective tools are dangerous. Use only tools which are safe. Exchange worn and defective tools.

Use the right size and type of tool for the job. There are special hammers, wrenches, pliers, screwdrivers, chisels and saws for many different types of work. The right type of tools makes the job easier and safer.

Carry tools in tool box, bag or tool belt; not in pockets or pants belt. Edged or pointed tools especially should not be carried in your pockets.

Keep tools clean. Grease and dirt cause slips and mashed fingers.

Tools lying around on benches, near machines and on floors and ladders cause accidents—and get lost. Put them back in your kit when you are through with them. This is especially important for chisels and other sharp tools.

Mushroomed and burred heads on striking tools can cause serious injury—get those heads ground down.

When possible, pull on the handle of a tool rather than push on it.

Do not use excessive pressure or force on hand tools. If the tool requires too much exertion, it is not the right tool for the job.

In areas containing explosive fumes and dust, be careful in handling all tools. A spark from an ordinary tool may cause an explosion. Consult your supervisor as special tools may be required in hazardous areas.

## TRUCKS

### *Hand Trucks*

Do not overload hand trucks; make sure your load is stable.

Hand trucks should be pushed, not pulled. (The exception is the four wheel truck with the swivel axle and tongue which is designed for pulling.)

Secure help in getting hand trucks up or down inclines to prevent them getting away from you.

Use the right type hand truck for the material you are moving. If there is a special truck—for example, a drum or carboy truck—for the job, it should be used.

When loading a hand truck, keep your feet clear of the wheels.

Block the wheels to prevent the truck from tipping or rolling.

Hand trucks should not be parked in aisles. Two-wheel trucks should be parked so that they will not fall.

Riding hand trucks and hitching rides on power trucks or trailers is against safety regulations.

### ***Power Trucks***

Operate a power truck at a safe speed at all times. A safe speed is determined by the type of load, aisle space, and foot traffic. Trucks must travel at a speed that will allow them to stop safely in case of an emergency. The speed limit set in the area is the maximum, for ideal conditions.

Trucks must stop at blind intersections and before passing through doorways.

Truck operators should refuse to transport loads which are unstable or are above the rated capacity of their vehicle. Dock plates must be anchored. Truck operators should approach them at a right angle and drive over them slowly.

In elevators, the truck motor must be turned off and brakes set.

Truck operators must sound the horn or bell when approaching pedestrians. However, sounding a warning does not give an operator the right-of-way. He must proceed slowly until pedestrians are out of the way.

Lift trucks should not be operated with forks up. Use the tilt control to bring load over drive wheels. This keeps load from spilling.

Power truck operators should report such conditions as decrease in normal speed, lack of power, poor brakes, poor steering control.

## **OFF-THE-JOB SAFETY**

The rules of safety you use at work are equally good for you and your family while you are away from the job.

For safety 24 hours a day, teach—and practice—safety in your own home.

Be a safe pedestrian. Stay alert and do not jaywalk.

Be a good driver—as good as you know how.

And remember—the life you save may be your own!

## **PERSONAL SAFETY CHECK LIST**

Ten O.K.'s on the items below may not mean perfection, but they will certainly help you stay on the job.

### **DO YOU—**

- Believe in safety for yourself ?
- Keep your mind on your job ?
- Welcome instruction on how to improve your work ?
- Keep your temper, absorb small troubles ?
- Like your job and respect your supervisor's judgment ?
- Use all necessary safety appliances and devices ?
- Shy away from short cuts and chance-taking ?
- Leave personal worries at home ?
- Keep your roughhouse strictly for your own hours and away from the job ?
- Stay in good physical condition, get enough sleep and the right kind of food ?



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